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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,998	04/14/2004	Julia Billiard	2004658-0047 (AM101291)	7072
7590 03/09/2007 Patent Department Attn: C. Hunter Baker, M.D., Ph.D. Choate, Hall & Stewart LLP Two International Place Boston, MA 02110			EXAMINER XIE, XIAOZHEN	
			ART UNIT 1646	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	
3 MONTHS			03/09/2007	
			DELIVERY MODE PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/823,998

Applicant(s)

BILLIARD ET AL.

Examiner

Xiaozhen Xie

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 29 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-92 is/are pending in the application.
- 4a) Of the above claim(s) 1-19, 21, 22, 24, 26 and 28-92 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20, 23, 25 and 27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 20040414, 20041222, 20050523.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Status of Application, Amendments, And/Or Claims***

The Information Disclosure Statement (IDS) filed 14 April 2004, 22 December 2004, and 23 May 2005 has been entered.

### ***Election/Restriction***

Applicant's election of Group III, claims 20-27, and species election of Ror2 as the species of Ror and Ror autophosphorylation as the species of Ror activity detected, in the reply filed on 29 January 2007 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 1-92 are pending. Claims 1-19 and 28-92 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Claims 20-27 are under examination to the extent they read on the elected species. Claims 20, 23, 25 and 27 read on the elected species.

### ***Drawings***

The drawings (Figures 13, 15 and 16) are objected to under 37 CFR 1.83(a) because they fail to show details as described in the specification. Figures 13, 15 and 16 are not legible. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office

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action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because it states "it is emphasized that the abstract is provided to comply with the rules..." and "it is submitted with the understanding that it will not be used to interpret or limit the scope or meaning of the claims. 37 CFR 1.72(b)", which are not related to the content of the invention.

Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 20 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Clary (WO 98/45708, International Publication Date 15 October 1998). WO 98/45708 teaches a method of identifying one or more compounds that modulate the function of a receptor protein tyrosine kinase (RPTK) in a cell, including orphan RPTKs such as Ror2, C-RET, SEK and MCK-10 (pp. 16, lines 30-32, pp. 19, lines 9-14). WO 98/45708 teaches that the method comprises the steps of: (a) transfecting a nucleic acid encoding a chimera comprising an extracellular region and an intracellular region, wherein the intracellular region is from the RPTK; (b) contacting the cells with one or more compounds; (c) contacting the cells with an antibody, where the antibody has specific binding affinity to the extracellular region; and (d) monitoring the effect on the cell to identify compounds that modulates the function of the RPTK (pp. 16, lines 32 through

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pp. 17, line 9) (claims 20 and 23). WO 98/45708 teaches that a compound may activate the RPTK by bringing RPTKs into close proximity with one another such that they cross phosphorylate (pp. 17, lines 18-22). WO 98/45708 teaches measuring autophosphorylation in C-ret, SEK and MCK-10 transfected cells (pp. 61, lines 21-24). Since the instant specification defines "Ror molecules" as Ror polypeptides, Ror peptides, fragments, variants and mutants thereof (specification, pp. 19, lines 11-17), the chimeric Ror2 polypeptide of WO 98/45708 meets the limitations of the instant claims. Therefore, WO 98/45708 anticipates the instant invention.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 98/45708, in view of Oishi et al. (Genes to Cells, 1999, 4:41-56).

WO 98/45708 teaches as set forth above. WO 98/45708, however, does not teach that Ror2 has autophosphorylation activity (claims 25 and 27).

Oishi et al. teach that both Ror1 and Ror2 tyrosine kinases exhibit autophosphorylation activities (pp. 47, right column, last paragraph).

It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of WO 98/45708, with those of

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Oishi et al., to measure Ror2 autophosphorylation in a screening method that requires determining the effect of a compound on Ror2 activity. One of ordinary skill in the art would have been motivated to combine the teachings, because WO 98/45708 teaches a screening method that comprises determining the effect of a compound on Ror activity, and Oishi et al. teach that Ror, including Ror1 and Ror2, has autophosphorylation activities. Therefore, the teachings provide a reasonable expectation of successfully screening for a compound.

### ***Conclusion***

NO CLAIM IS ALLOWED.

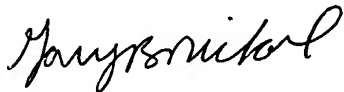
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xiaozhen Xie, Ph.D whose telephone number is 571-272-5569. The examiner can normally be reached on M-F, 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary B. Nickol, Ph. D. can be reached on 571-272-0835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Xiaozhen Xie, Ph.D.  
March 1, 2007

A handwritten signature in cursive script, appearing to read "Gary B. Nickol".

**GARY B. NICKOL, PH.D.  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1600**